United States Environmental Protection Agency

EPA Proposes Waste Cleanup at Former Zinc Plant

Eagle Zinc Site
Hillsboro, Illinois June 2012

Your opinion wanted

EPA invites you to comment on the proposed cleanup plan for the Eagle Zinc site. Your input is important because EPA may modify or select another cleanup option based on public comments. There are several ways your voice can be heard during the public comment period that runs until June 30, 2012.

- Fill out and return the enclosed comment form by the deadline.
- Email comments to EPA Community Involvement Coordinator Ginny Narsete at narsete.virginia@epa.gov.
- Attend the public hearing on Thursday, June 14, 2012, 6:30 p.m., at Hillsboro High School Cafeteria, 522 East Tremont St., Hillsboro, and submit a written or oral statement.
- Via the Web at www.epa.gov/region5/cleanup/eaglezinc/pubcomment.html.

For more information

If you have questions about the comment period or public meeting or want to learn more about the Eagle Zinc site you can contact these team members:

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Superfund Division
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The U.S. Environmental Protection Agency is proposing a plan to clean up the remaining pollution at the Eagle Zinc site by treating hazardous waste, gathering waste under a cover and digging up contaminated sediment (mud) and realigning a stream.

This fact sheet is a summary of a more detailed document called a proposed plan and outlines several cleanup options and EPA's preferred cleanup alternative. EPA, working with Illinois EPA, will not select a final cleanup plan until after it reviews comments received from the public at a June 14 hearing and public comment period (see left-hand box for ways you can participate in the decision-making process). The Agency is issuing the proposed cleanup plan as part of its public participation responsibilities under the federal Superfund law.[1] EPA may modify the proposed cleanup plan or select another option based on new information or public comments so your opinion is important.

EPA, with input from the Illinois EPA, will select a final cleanup plan after considering comments from the public. The final plan could differ from this proposed plan, depending on information or comments EPA receives during the public comment period or at the public hearing. EPA will announce the final plan in a local newspaper notice.

About the Eagle Zinc site

Eagle Zinc is located in a mixed industrial/commercial/residential area in Hillsboro, Illinois. The property contains 132 acres with 23 dilapidated buildings covering about 30 acres of the site. In order to deal with the site more effectively, EPA divided it into operable units or OUs. OU1 manages the risk from the contamination associated with the dilapidated buildings on the site. OU2 concentrates on health risks connected with contaminated manufacturing residue, soil, sediment, surface water and "groundwater." Groundwater is an environmental term for underground supplies of water.

A cleanup plan was selected for OU 1 in September 2009 that calls for demolition and on-site disposal of the building debris. The focus of this proposed plan is to present cleanup options for OU 2. The property contains several railroad spurs, residual material, two storm water retention ponds, one larger pond in the southwestern portion of the area, one small pond in the southeastern portion and several roads.

Risks to people and the environment

Contaminants of concern for this site are metals including zinc, lead, cobalt and nickel among others. Pollutants were evaluated on whether they could cause cancer and other illnesses. Experts also determined what types of people in what kinds of situations would be most at risk of exposure to site

[1] *Section 117(a) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA known as the Superfund law) requires public notice about this proposed cleanup plan through a meeting, comment period and newspaper announcement. This fact sheet summarizes information contained in the feasibility study and other documents that can be reviewed at the Hillsboro Public Library and EPA Region 5 offices in Chicago.*

pollution. A health study for OU2 looked at what kind of risks would be experienced by industrial and construction workers due to lead exposure in the soil if no cleanup is undertaken. For this site, if a future industrial worker were to incidentally swallow a little soil and residue every workday over their lifetimes, there is a potential for that person becoming ill due to the high levels of antimony, zinc and lead in the residue and soil. For a future construction worker, the unacceptable risk is based on incidental swallowing, skin contact and breathing in zinc and lead particles.

Experts also looked at health risks to common wildlife that live in the area such as field mice, hawks and robins but found minimal adverse impact. However, there is unacceptable risk to the aquatic organisms due to the contamination in their environment.

Cleanup options

EPA considered four cleanup alternatives for OU 2. Each option was evaluated against nine criteria as required

by the federal Superfund law (see box Page 3 for an explanation of the criteria). Full technical details about the alternatives are available in a document called a "feasibility study," which is on file at the Hillsboro Public Library and the Web.

Option 1 – No Action: No action alternatives are always included as a comparison point for other cleanup options. Under this option, no cleanup work would be conducted. Direct contact with residue and soil would be a risk to industrial and construction workers if residue remained on-site or was redistributed across the property in the future. Surface water would not meet EPA standards and continues to affect the water that discharges to water drainage systems. Sediment would remain a potential risk to wildlife. Cost: $100,000 (includes 30 years of monitoring).

Option 2 – Immobilization and IAC 807 Compliant Soil Cover: *Immobilization of residue Piles NP-14, RR1-3, and MP1-21* – Residue piles, which have the potential to leach into water supplies, would be consolidated into one designated area and treated on-site using immobilizing agents to meet the cleanup standards for cadmium, lead, and zinc. The treated residue piles would be consolidated within the soil cover area and then covered with two feet of soil and vegetation. The estimated volume to be treated is 2,100 cubic yards. Consolidation, grading, and cover of residue material exceeding the remedial objectives – Loose residue and residue piles containing contamination that exceeds the cleanup standards would be consolidated within the southern portion of the existing residue boundary, graded and covered with clay and topsoil.

The future temporary demolition management cell containing OU1 demolition debris would be dismantled and incorporated into the residue area to be covered. In addition, sediment from two small on-site ponds would be cleaned up by "monitored natural recovery." Monitored natural recovery uses natural processes such as dilution, evaporation and decay to make pollutants less dangerous. Monitored natural recovery would rely on the soil cover over the residue to prevent erosion of contaminated residue and allow deposition of uncontaminated sediment over the existing sediment. The area of residue to be covered is around 18 acres. The section chosen for consolidating the residue would first be cleared and then regraded to establish the required slopes. The residue would be covered with IAC 807-compliant soil cover consisting of a compact layer of no less than 24 inches of suitable material. A 6-inch soil cover with vegetation would be added to prevent direct contact with the residue and the controlled surface water drainage system. The surface water drainage system is expected to keep flow away from the consolidated area that would reduce infiltration and potential contamination of the surface water and sediment.

An institutional control, called a restrictive covenant, is on the property's deed to notify future property owners the residue and soil at the site poses risks to human health and the environment. The covenant restricts the use of groundwater, prevents disturbance of the cleanup work, and prohibits residential use.

Groundwater, surface water and sediment would be monitored and the results will be evaluated and compared against the cleanup goals. A report would be prepared annually analyzing the monitoring results and recommending future monitoring actions. **Cost:** $15.3 million. **Time to Implement:** Three months.

Option 3 – Immobilization, IAC 807 Compliant Soil Cover, and Stream Re-alignment (this is EPA's preferred option): *Immobilization of residue piles NP-14, RR1-3, and MP1-21* – Option 3's immobilization of residue piles would be the same as Option 2. Consolidation, grading, and 807 cap over residue piles – Option 3's consolidation and cover of residue and soil with contamination exceeding safety standards would be the same as Option 2. However, the area to be covered would be larger, about 22 acres, and the southwestern pond would

Read the documents

An administrative record, which contains detailed information that will be used in the selection of the cleanup plan, is available for review and located at:

Hillsboro Public Library
214 School St.

EPA's regional office at 77 W. Jackson Blvd., Chicago.

On the Web:

www.epa.gov/region5/cleanup/eaglezinc/

be filled in with the residue material. Stream re-alignment, sediment excavation, and on-site consolidation – The westward flowing stream that originates in the center of the site and flows to the southwestern corner of the property would be realigned to reduce surface water interaction with the existing residue and to return the stream to its natural flow pattern. The wetland along the stream would be excavated to accommodate the re-alignment. A new wetland would be constructed to retain some of the wetland functions, the wildlife habitat and to increase the area's water storage capacity during big storms. Sediment from the former stream bed would be excavated as needed and consolidated with the residue underneath the cover. Sediment from the ditch and stream located along the southern perimeter of the site, the two small on-site ponds, and the off-site tributary to the northeastern stream system that drains toward Lake Hillsboro would be cleaned up by excavation and on-site disposal under the soil cover.

Institutional controls would be the same as Option 2 and so would monitoring and assessment except the sediment would not be monitored since it would be removed. **Cost:** $18.7 million. **Time to Implement:** Five months.

Option 4 – Immobilization, IAC 811 Compliant Cap, and Creek Re-alignment – *On-site immobilization of residue piles NP-14, RR1-3, and MP1-21* – Same as Option 2. Consolidation, grading, and 811 cap over residue piles – The Option 4 consolidation and cover is the same as that for Option 3, except Option 4 has an IAC 811 cap instead of an IAC 807 soil cover. The specific cap cross section would be selected in the design phase of the cleanup. For cost estimating purposes it is assumed the cap would include 6 inches of topsoil (with vegetation), 3 feet of soil for freeze-thaw protection, double-sided, 40-milimeter linear low-density polyethylene geomembrane, and 2 feet of low-permeability clay or a combination clay/man-made material liner (called geosynthetic). Stream re-alignment, sediment excavation, and onsite consolidation – Same as Option 3. Institutional controls and monitoring and assessment would be the same as Option 3. **Cost:** $24.6 million. **Time to Implement:** 5 months.

Evaluating the options

EPA evaluated the cleanup options against seven of the nine criteria required by federal Superfund law and selected Option 3 as its preferred cleanup alternative. The chart on P. 7 shows how the options stack up against the criteria. Option 3 appears to be the best mix of cost-effectiveness while still protecting human health and the environment.

State and community acceptance will be evaluated after EPA receives public comments. More information about the option evaluation is provided in the technical documents on file at the Hillsboro Public Library and the Web.

Next steps

EPA, in consultation with Illinois EPA, will evaluate public reaction to the recommended cleanup option during the public comment period before deciding on a final cleanup plan for this site. Based on new information or public comments, EPA may modify its recommended option or select another. EPA encourages the public to review and comment on the cleanup options.

The Agency will respond in writing to public comments in a "responsiveness summary," which will be attached to the document detailing the final cleanup plan, called a record of decision or ROD. EPA will announce the ROD in a local newspaper advertisement, place a copy of the record of decision with the other technical documents at the Hillsboro Public Library and post it on EPA's website, www.epa.gov/region5/sites/eaglezinc.

See comparison chart on back page.

Evaluation criteria

EPA compares each cleanup option or alternative with these nine criteria established by federal law:

1. Overall protection of human health and the environment examines whether an option protects both human health and the environment. This standard can be met by reducing or removing pollution or by reducing exposure to it.

2. Compliance with applicable or relevant and appropriate requirements (ARARs) ensures options comply with federal, state and local laws.

3. Long-term effectiveness and permanence evaluates how well an option will work over the long-term, including how safely remaining contamination can be managed.

4. Reduction of toxicity, mobility or volume through treatment determines how well the option reduces the toxicity, movement and amount of pollution.

5. Short-term effectiveness compares how quickly an option can help the situation and how much risk exists while the option is under construction.

6. Implementability evaluates how feasible the option is and whether materials and services are available in the area.

7. Cost includes not only buildings, equipment, materials and labor but also the cost of maintaining the option for the life of the cleanup.

8. State acceptance determines whether the state environmental agency (in this case Illinois EPA) accepts the option. EPA evaluates this criterion after receiving public comments.

9. Community acceptance considers the opinions of nearby residents and other stakeholders about the proposed cleanup plan. EPA evaluates this standard after a public hearing and comment period.

Comparing cleanup options with criteria

Evaluation Criteria	Alternatives			
	1	2	3**	4
Overall Protection of Human Health and the Environment	○	●	●	●
Compliance with ARARs	○	●	●	●
Long-term Effectiveness and Permanence	○	◉	●	●
Reduction of Toxicity, Mobility, or Volume through Treatment	○	●	●	●
Short-term Effectiveness	●	●	◉	◉
Implementability	●	●	●	●
Cost	$100,000	$15.3 million	$18.7 million	$24.6 million
State Acceptance	These criteria will be evaluated after the public comment period.			
Community Acceptance				

● Fully meets criterion ◉ Partially meets criterion ○ Does not meet criterion

** Indicates EPA's preferred cleanup option

EAGLE ZINC SITE: EPA Proposes Waste Cleanup at Former Zinc Plant

United States
Environmental Protection
Agency
Region 5
Superfund Division (SI-7J)
77 W. Jackson Blvd.
Chicago, IL 60604-3590

Use This Space to Write Your Comments

EPA is interested in your comments on the proposed cleanup plan for the Eagle Zinc site. You may use the space below to write your comments. You may submit this at the June 14 public meeting, or detach, fold, stamp and mail to EPA Community Involvement Coordinator Ginny Narsete. Comments must be postmarked by June 30. If you have any questions, please contact Ginny directly at 312-886-4359, or toll free at 800-621-8431, 8:30 a.m. – 4:30 p.m., weekdays. Comments may also be sent by the Internet at www.epa.gov/region5/cleanup/eaglezinc/pubcomment.html.

Eagle Zinc Comment Sheet

Fold on Dashed Lines, Tape, Stamp, and Mail

Name _____

Address _____

City _____ State _____

Zip _____

Place Stamp Here

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